

"Virtual Port Bridge"
Inventor: Bollay et al.
(Dkt No. 10547-015-999)
(650) 493-4935

Filing Date: Herewith
Pennie & Edmonds LLP
Atty: Thomas E. Kohler, Esq.

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| | |
|----------------|-------------|
| Network Number | Host Number |
|----------------|-------------|

Class B address

| | |
|----------------------------|----------|
| 11111111111111111111111111 | 00000000 |
|----------------------------|----------|

Subnet mask (255.255.255.0)

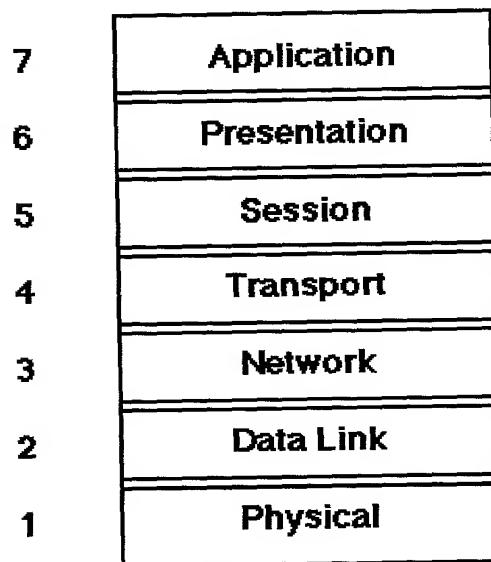
| | | |
|----------------|-----------|---------|
| Network Number | Subnet ID | Host ID |
|----------------|-----------|---------|

Subnetted address

(Prior Art)

Fig. 1

Layer Functionality



(Prior Art)

Fig. 2

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JURISDICTIONAL STATEMENT

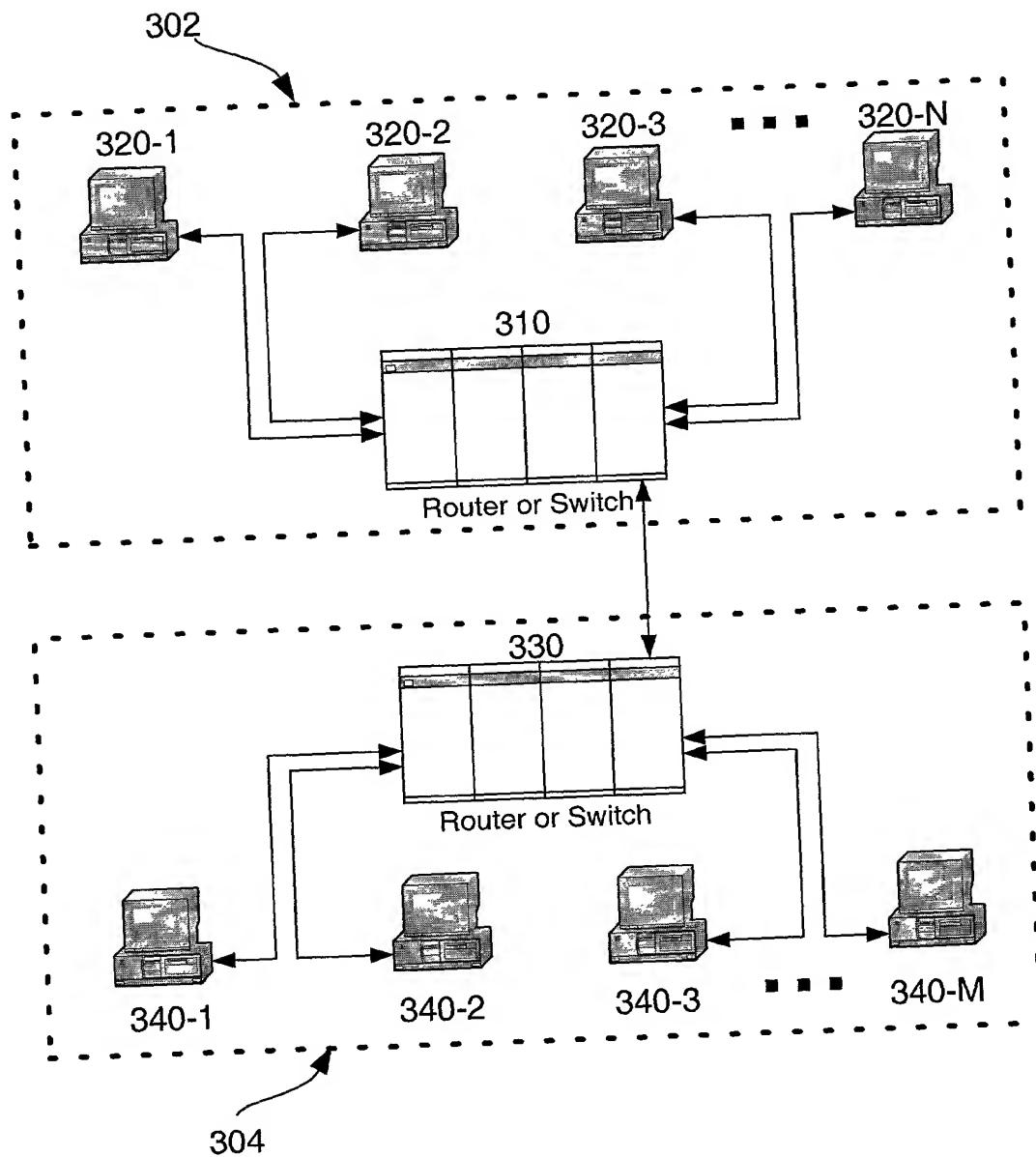


Fig. 3

402

PC1, which is on network segment 302, sends out an ARP broadcast request packet, denoted MAC(PC1), requesting the MAC address of PC2. The ARP broadcast request packet is directed to the IP address of PC2. However, PC2 is on a different network segment so MAC(PC1) does not reach PC2.

404

Router 310, which is on the network segment 302, converts the ARP broadcast request packet MAC(PC1) to a special broadcast request denoted MCAST(MAC(PC1)).

406

Router 310 records the fact that MCAST(MAC(PC1)) is the same device as MAC(PC1).

408

Router 310 sends MCAST(MAC(PC1)) to the Router of each network segment in the network, including Router 320.

410

Each device in each network segment receives the modified broadcast message MCAST(MAC(PC1)).

440

Fig. 4A

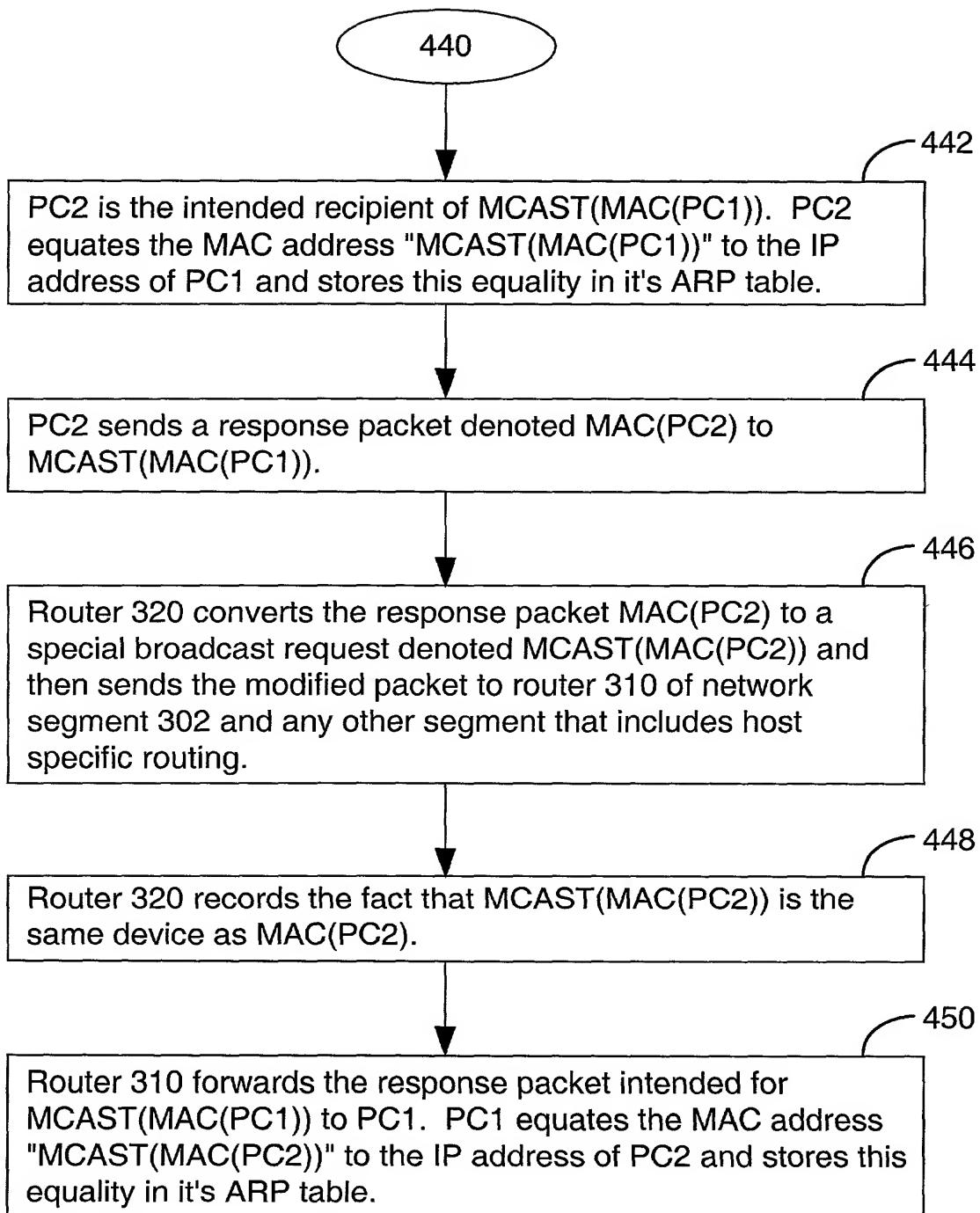


Fig. 4B